OBJECTIVES: Thromboembolic (TE) events are a major complication of polycythemia vera (PV). Little is known about economic implications of TE events in such patients. This study aims to assess the incremental health care resource use (HCRU) and costs associated with PV and post-PV TE events in a real-world patient population. **METHODS:** We conducted a retrospective cohort study of PV patients aged <65 years enrolled in employer-sponsored commercial health plans in the US. Annual all-cause and PV-related HCRU and costs (adjusted to 2014 US dollars) among PV patients were compared against non-PV comparison subjects who were propensity-matched on demographics and comorbidities. For patients with a post-PV TE event, average 12-month costs following index TE event were assessed. Costs were also analyzed in a subgroup receiving hydroxyurea treatment. **RESULTS:** A total of 12,990 PV patients (diagnosed 2000-2012) were included. HCRU was generally higher among PV patients versus matched comparison subjects, with largest difference observed for outpatient hospital visits (90% vs. 70% respectively, $p < 0.0001$). Mean all-cause annual total costs among PV patients were significantly greater than comparison subjects ($17,418 vs. $10,501, $P < 0.0001$). In a subset of patients treated with hydroxyurea (n=774), mean PV-related annual total costs ($7,657) were nearly 3 times higher in contrast to costs observed among all PV patients ($2,535). Among PV patients experiencing TE events, mean 12-month all-cause costs were more than 4 times higher than among those with no TE event ($48,211 vs. $10,958, $P < 0.0001$). **CONCLUSIONS:** Total all-cause HCRU and costs in PV patients were substantially higher compared to a matched non-PV comparison group. Patients receiving hydroxyurea had higher costs, potentially reflective of inherently more severe disease in this patient subgroup. Costs were also substantially higher among patients experiencing post-PV TE events, highlighting the importance of treatments that may reduce cardiovascular complications in patients with PV.

PCN298

THE CLINICAL AND ECONOMIC BURDEN OF SKELETAL RELATED EVENTS IN AUSTRIA, CZECH REPUBLIC, GERMANY, GREECE, ITALY, SPAIN AND SWITZERLAND: A COMPARISON BETWEEN THE USE OF DENOSUMAB AND ZOLEDRONIC ACID IN PATIENTS WITH PROSTATE CANCER AND BONE METASTASES

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OBJECTIVES: To estimate the total number of skeletal-related events (SREs), the associated hospital burden and direct medical costs when denosumab is used instead of zoledronic acid in patients with prostate cancer (PC) and bone metastases (BMs). **METHODS:** A model was developed using the following data: country-specific PC mortality data from the World Health Organization or local registries; the proportion of PC patients with BMs from published literature; the prevalence of BMs in the metastatic PC population assuming a steady state approach (with mortality of metastatic disease equivalent to incidence); and the average survival of metastatic PC patients from published literature. Both the annual SREs rates from a European observational study and the treatment effect of denosumab versus zoledronic acid reported in a head-to-head clinical trial were used to predict the total number of SREs by treatment. Country-specific data from two multi-country observational studies were used to estimate the total number of hospitalisations, length of inpatient stays and direct medical costs associated with the management of SREs. **RESULTS:** Of the 67,375 patients with PC and BMs, the prevalence by country was: Austria, 2,447; Czech Republic, 2,707; Germany, 28,447; Greece, 3,888; Italy, 16,683; Spain, 9,428; and Switzerland, 2,776. If denosumab was the selected treatment option for all patients, an estimated 38,690 SREs per year could be avoided, leading to 14,599 fewer hospitalisations, a reduction of 270,007 inpatient days, and 155,213,984€ of savings in direct medical costs per year. The 2014 costs saved by country were: Austria, 19,919,201€; Czech Republic, 4,095,737€; Germany, 36,895,464€; Greece, 18,504,154€; Italy, 24,529,334€, Spain, 18,931,728€ and Switzerland, 31,338,666€. **CONCLUSIONS:** Denosumab can result in significant reductions in the number and length of inpatient stays of PC patients with BMs, leading to substantial savings of direct medical costs associated with the management of SREs in each of the 7 European countries.

PCN299

THE CLINICAL AND ECONOMIC BURDEN OF SKELETAL RELATED EVENTS IN AUSTRIA, CZECH REPUBLIC, GERMANY, GREECE, ITALY, SPAIN AND SWITZERLAND: A COMPARISON BETWEEN THE USE OF DENOSUMAB AND ZOLEDRONIC ACID IN PATIENTS WITH BREAST CANCER AND BONE METASTASES

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OBJECTIVES: To estimate the total number of skeletal-related events (SREs) prevented, related hospital burden and direct medical expenditure when denosumab is used instead of zoledronic acid for SRE prevention in seven European countries. **METHODS:** A model was developed combining country-specific breast cancer mortality data from the World Health Organization or from local registries, the proportion of metastatic breast cancer patients with bone metastases (BMs) at high risk of developing SREs from published literature, the prevalence of breast cancer with BMs was derived assuming a steady state approach (with incidence equivalent to mortality of metastatic disease), and the average survival for metastatic breast cancer patients from published literature. Annual SRE rates from a European observational retrospective study and the treatment effect observed in a head-to-head clinical trial of denosumab versus zoledronic acid were used to estimate the total number of predicted SREs by treatment option. Country-specific findings from two retrospective studies were used to estimate the total number of hospitalisations, inpatient days and direct medical costs associated with the management of SREs. **RESULTS:** Across all countries, the estimated prevalence of breast cancer patients with BMs was 87,592 patients: Austria, 3,253; Czech Republic, 3,509; Germany, 37,895; Greece, 4,639; Italy, 27,767; Spain, 7,553; and Switzerland, 2,975. When denosumab was the selected treatment option, 36,324 SREs were estimated to be avoided per year compared with the use of zoledronic acid, which would save 24,110 hospitalisations, 536,551 inpatient days and 206,605,754€ of direct medical costs (2014 costs in €: Austria, 23,890,554; Czech Republic, 5,779,856; Germany, 60,659,628; Greece, 15,941,728; Italy, 39,998,970; Spain, 17,249,548; and Switzerland, 43,085,469). **CONCLUSIONS:** Denosumab's clinical superiority in the prevention of SREs over zoledronic acid could result in significant savings in the number and duration of hospitalisations, reducing direct medical costs associated with the management of SREs in Europe.

PCN300

SWITCHING TO A 6-MONTHLY TRIPTORELIN FORMULATION FOR PROSTATE CANCER (PCA) REDUCES PATIENT–NHS INTERACTIONS AND HOSPITAL RESOURCE USE: REAL WORLD EVIDENCE (RWE) FROM PROJECT DESERVE (DECAPEPTYL SERVICE EVALUATION)

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OBJECTIVES: In the UK, PCa is the second most common male cancer resulting in over 10,000 deaths annually. LHRH agonists (LHRHa), a type of androgen deprivation therapy, are used to help control PCa and delay progression. LHRHa injections are available as 1-, 3- and 6-monthly formulations. Triptorelin is the only LHRHa in the UK available as a 6-monthly formulation. DESERVE aimed to collect RWE about clinical and practical outcomes for patients starting on, or switching to, 6-monthly triptorelin. **METHODS:** A customised data collection programme was designed including up to 2 years of data entered retrospectively by physicians from patient records at three UK hospitals and prospectively updated over a 5-month period. All patients on 6-monthly triptorelin were eligible for entry. The primary outcome measure was change in the number of patient–NHS interactions (patient reviews, PSA tests and LHRHa injections). **RESULTS:** 115 patient records were entered; records for 88 patients had complete data and were included in the analysis. 47 were newly diagnosed and initiated on 6-monthly triptorelin; 41 were switched from any 3-monthly LHRHa to 6-monthly triptorelin. For switch patients, there was a statistically significant reduction in the number of reviews (by 48.4%; $p<0.0001$), injections (48.4%; $p<0.0001$) and PSA tests (29.8%; $p<0.0001$) in the 12 months following switch versus 12 months before. The total number of patient–NHS interactions was significantly reduced (43.5%; $p<0.0001$). At 12 months, median PSA was 1.30 ng/mL (23.50 ng/mL at diagnosis) for newly treated patients and 0.24 ng/mL (0.35 ng/mL at switch) for switch patients. No safety issues were identified. **CONCLUSIONS:** Patient–NHS interactions were significantly reduced and PSA control was maintained with 6-monthly triptorelin vs any 3-monthly LHRHa, which translates into NHS savings and improvement in the overall patient experience. Use of 6-monthly triptorelin may therefore offer advantages over 3-monthly formulations for patients, prescribers and payors.

PCN301

COST-EFFECTIVENESS ANALYSIS OF RITUXIMAB IN TREATMENTING DIFFUSE LARGE B-CELL LYMPHOMA IN CHINA

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OBJECTIVES: To provide a scientific basis for the clinical use of drugs and the development of government drug policy through pharmacoeconomic study of rituximab combined with conventional chemotherapy in treating patients with diffuse large B-cell lymphoma. **METHODS:** From the perspective of the health care system, with 60 years older diffuse large B-cell lymphoma patients in this study, the three-month cycle Markov models was established with the time limit of five years and 30 years. By controlling treatment, the total direct medical costs of each health status in three months associated with DLBCL was got through expert advice and the methods Price*Number. The transfer probability between the health statues was calculated through survival data of clinical trial; health outcomes within three months of DLBCL patients were obtained from literature. On this basis, the pharmacoeconomics evaluation was conducted of two programs of rituximab combined with conventional chemotherapy and conventional chemotherapy in treating DLBCL. **RESULTS:** The basic analysis showed that: model runs for 5 years, R-CHOP group is more effective than CHOP group (2.55QALYs>1.90QALYs), with the higher cost than CHOP group (612564.37yuan>138212.22yuan), the incremental cost-effectiveness ratio is 735297.10yuan/QALY.Model runs for 30 years, R-CHOP group is more effective than CHOP group (4.14QALYs>2.51QALYs), with the higher cost than CHOP group (887550.16yuan>221662.73yuan), the incremental cost-effectiveness ratio is 407808.50yuan/QALY. According to the willingness to pay range (48857.55yuan-146572.7yuan) which was set by China's per capita GDP, R-CHOP program has higher cost and better effect, but does not have cost-effectiveness advantage in five or thirty years. **CONCLUSIONS:** Based on the research's results and China's current situation, we can say that rituximab combined with conventional chemotherapy for DLBCL patients compared with single conventional scheme does not have the cost-effectiveness advantage in 5 or 30 years.